

## ABSTRACT

The present invention increases the difficulty of interpreting electromagnetic emissions from a keypad system by facilitating randomness in the electromagnetic emissions associated with a particular key activation. A keypad security circuit utilizes a set of digital values that varies over both time and the bits as a keypad driver word applied to a keypad attribute (e.g., a row or column). The keypad security system of the present invention drives the varying strong keypad driver signal to an attribute of a keypad switch matrix (e.g., the rows or columns), applies an independently configured weak driver signals to the opposing attribute of the keypad switch matrix, retrieves a resulting signal from the opposing attribute, and interprets the results to determine if a switch included in a keypad system was activated (e.g., a key is pressed).